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ABSTRACT

The need to coordinate the research being done in vocational and technical education is all too apparent. Numerous government agencies, universities, foundations and research centers are among those involved directly or indirectly in this type of research. Puerto Rico sought to maximize the benefits from these research activities by establishing a Research Coordinating Unit (RCU) with the expressed purpose of encouraging, stimulating, coordinating, and disseminating research for the improvement of vocational education. This final report summarizes the projects and activities of the RCU in addition to presenting (1) their plan of organization, (2) the development of their staff, (3) funding and related problems, and (4) future plans. (JS)

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FINAL REPORT

Project No. 8-0007
Grant No. OEG-3-8-080007-0031 (085)

PUERTO RICO VOCATIONAL AND TECHNICAL RESEARCH AND DEVELOPMENT COORDINATING UNIT

April 1, 1968 - August 31, 1969

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TABLE OF CONTENTS

	Page
SUMMARY	1
INTRODUCTION	3
METHODS	5
SIGNIFICANT FINDINGS AND EVENTS	9
PROBLEMS	33
CAPITAL EQUIPMENT ACQUISITIONS	33
FORMS	33
CONCLUSIONS AND RECOMMENDATIONS	34
FUTURE ACTIVITIES	35
APPENDIXES	
1. Organization of the RCU	36
2. Staff Summary	37
3. Relationship of the RCU to the Department of Education	40

SUMMARY

The Puerto Rico Vocational and Technical Research and Development Coordinating Unit was established in April 1, 1968 with a direct grant from the Bureau of Research, U. S. Office of Education, under Section 4(c) of the Vocational Education Act of 1963. Funds from Titles I and III of the Elementary and Secondary Education Act and Commonwealth funds of the Area for Vocational and Technical Education were also used for project development. This final report indicates activities of the RCU from April 1, 1968, through August 31, 1969.

The RCU chief responsibility was to encourage, stimulate, coordinate, and disseminate research to facilitate improvement of vocational and technical education in the Commonwealth of Puerto Rico.

The major activities of the RCU in relation to the objectives of the Unit include the following:

1. Activities in the conduct of research studies, development of specific research and related studies; implementation of studies of local problems; and improving research design and statistical techniques.

   Nineteen projects were planned of which three were not funded.

   Three projects were withdrawn after preliminary plans had been tentatively approved. Three projects were completed and ten were in various stages of development at the end of the project period. Coordination of efforts was maintained with the vocational programs and with other government and private agencies.

2. Establishment and maintenance of an information center for collection, storage, and dissemination of literature related to vocational and technical education.

   The RCU Library includes more than 2,000 titles of shelved materials. It has available copies of research reports, of curriculum materials; of RIE, ARM, AIM publications, and ERIC publications, and various research related materials from other sources. Dissemination of information was conducted in meetings and conferences, and in other ways listed in detail in the report.

3. Development of in-service workshops for research training of vocational educators.

   In-service activities were emphasized and stimulated aiming at staff improvement in general. Implementations of 1968 and 1969 Summer Sessions In-service Teacher Training programs at the central level provided the participation of over 1,500 teachers and supervisors in undergraduate and graduate courses at several universities, workshops, seminars, special

conferences, and other staff training programs. A proposal was approved under Title I of the Elementary and Secondary Education Act aiming at providing 100 scholarships for vocational and technical education personnel working under provisional contracts to pursue undergraduate work.

Other in-service staff training activities were developed during the project period.

A varied number of research related activities were undertaken, all of which contributed to the RCU objectives. The RCU staff participated in numerous meetings, conferences and conventions, both in and outside the Commonwealth of Puerto Rico, aiming at keeping abreast with new developments in vocational and technical education, and for other purposes.

For the most part objectives of the RCU were achieved to a certain degree. The scope of activity was somewhat limited because of unavailability to obtain the services of regular staff, due mainly to limited numbers of researchers available and all employed, failure to generate other funds for research and failure to obtain approval of several proposals submitted.

Future activities include the development of research plans as provided in the Commonwealth Plan of the year. Research activities shall be conducted in terms of long-range objectives approved for this aspect of the program. Emphasis shall be given to vocational and technical program evaluation, assessment of needs, curricula and teaching strategies, vocational guidance and career choices, and leadership and professional development.

INTRODUCTION

This report covers the operation of the Puerto Rico Vocational and Technical Research and Development Coordinating Unit during a 17 month operation, from April 1, 1968, through August 31, 1969.

The RCU was established in April 1, 1968, with a direct grant from the Bureau of Research, Division of Adult and Vocational Research, U. S. Office of Education. It was originally funded under the Research Section 4(c) of the Vocational Education Act of 1963 in the amount of $140,000 extended over a three year period to pay part of the program authorized. Funds for the first year were approved in the amount of $65,000, to cover the period from April 1, 1968, through March 31, 1969. Report submitted about RCU operations as of December 31, 1968 and estimated expenses through August 31, 1969, resulted into an extension of the first year budget through August 31, 1969, and a reduction of $6,490.00.

In addition, funds provided under Purpose VI (Ancillary Services) of the same Act, funds from Titles I and III of the Elementary and Secondary Education Act, Title VA of the National Defense Act, and Commonwealth funds allocated to the Area for Vocational and Technical Education were used for RCU activities during the project period.

The RCU has been physically and administratively centered in the Area for Vocational and Technical Education of the Commonwealth Department of Education. Its functions were integrated with the research plan of the Commonwealth Department of Education, through liaison with its Research Division. As a permanent activity, the RCU is expected to serve as the mechanism for stimulation of constructive action through research and systematic, detailed appraisal and implementation of findings for the improvement of vocational and technical education in Puerto Rico at all levels.

The RCU staff has initiated activities to stimulate, encourage, coordinate, and disseminate research related to vocational and technical education in order to facilitate a continuing change and improvement of vocational education programs in the Commonwealth.

The RCU was organized in terms of the following major purposes:

1. Identify vocational research problems

2. Encourage, stimulate, and facilitate vocational research and improve research competencies

3. Contribute to effective information exchange on an interinstitutional and interregional basis

4. Promote implementation of research findings in improved practices, programs, and facilities

The objectives of the Unit are geared to:

1. Develop of specific research goals
2. Determine research and related studies
3. Implement studies of local problems
4. Improve research design and statistical techniques
5. Establish and maintain an information center for collection, storage, and dissemination of literature related to vocational and technical education
6. Improve coordination of efforts among individuals and institutions as related to vocational research to reduce duplication of efforts
7. Encourage the development and use of improved educational practices, methods, and materials
8. Stimulate communication in vocational education among administrators, researchers, and teachers
9. Develop in-service workshops for research training of vocational educators

Lateral coordination of efforts, broad participation, and use of all available resources through individuals, vocational educators and agencies and units of the Commonwealth government having varying degrees of obligations concerning education, manpower needs, and social and economic planning and development has been promoted during the project period.

During the first year of operation particular attention was focused on providing initial facilities and implementing the organizational structure; assessing needs for implementing the research subsystem; developing liaison between the RCU and the Commonwealth Board for Vocational Education, vocational and technical education program staffs, and collaborating Commonwealth agencies. Likewise, to giving continuity to various research projects and research related activities at the various programs prior to the Unit's establishment on April 1, 1968; to stimulating research and research related activities, and to initiating several projects.

Primary objectives of the present report is to describe the major activities and accomplishments of the RCU during the project period, under Section 4(c) of the Vocational Education Act of 1963, and to denote future activities planned under the new federal legislation, Vocational Education Amendments of 1968.

METHODS

Location and Organizational Structure

The RCU is located in the Commonwealth Department of Education and is responsible through its Director to the Assistant Secretary for Vocational and Technical Education, and ultimately to the Secretary of Education and Executive Officer of the Commonwealth Board for Vocational Education. The organizational structure is described in Appendix I, enclosed.

The Unit has served in an advisory capacity to the supervisory and administrative personnel of the Area for Vocational and Technical Education, and has performed research services for the entire staff related to vocational and technical education. This approach of integrating all of its activities into the operational structure of the Area for Vocational and Technical Education was advantageous in that the special competences of RCU personnel and the expertise of vocational specialists have been readily available when needed.

The organizational structure also allowed the RCU to communicate effectively and to maintain an excellent working relationship with all personnel involved.

Continues efforts were made to facilitate its growth and to increase both its staff and the scope of its services.

Staff

The director of the RCU is a member of the Commonwealth Vocational Staff and has served in a coordinating capacity with those engaged or interested in research activities. To this effect efforts were directed toward making the necessary contacts for and providing assistance and needed information about occupational education programs in the Commonwealth basic for project development; reviewing proposals for projects jointly with program directors and offering consultation services as needed.

During the project period the RCU was served by a full-time director, an assistant director, a statistician, and a stenographer, in addition to several other professional and office personnel with short-term or special contracts: two educational researchers in charge of two projects, a technical adviser, a specialist on occupational information, a statistician, an academic consultant, an adviser on Distribution and Marketing, a home economics teacher, and other personnel employed as research assistants and typists. Staff summary is described in Appendix II, enclosed.

The operation, supervision, and final responsibility of all RCU activities rested with the director, while the assistant director devoted most of his time to matters relating to statistical data collection on occupational education programs, and its dissemination, and follow-up studies of graduates; he also

served as acting director as necessary. The home economics curriculum specialist devoted her time to the home economics occupational education curriculum project. She also gave some time in assisting responsibilities in administrative matters of the RCU. Other research assistants served according to the various projects under development.

Major Functions of the RCU

The RCU performed the following major functions to provide support to research:

1. Research information and dissemination service

2. Identification of researchable problems related to vocational education

3. Organizing and maintaining a research related library including material available from different educational sources pertinent to research studies, including curriculum, manpower, and vocational education materials

4. Lending technical and consultative assistance for developing proposals for research and research related activities; conducting in-service training programs; formulating annual and long-range plans and preparing annual reports; revising and preparing curriculum materials and occupational guides; conducting related professional activities; interpreting Commonwealth and federal legislations related to vocational education; locating reference materials, among others.

5. Development of research proposals

   Information has been given regarding proposal format and research design and appropriate statistical methodology has been provided. Several research proposals were written and others revised and submitted to various sources for funding.

Conduct of Research

The RCU has conducted or initiated research dealing with follow-up of graduates, dropouts from vocational courses, assessment of needs, evaluations, curriculum development, and in-service training.

During the project period 19 projects were planned, three of these were not funded. Three projects were withdrawn for various reasons after preliminary plans had been tentatively approved. Three projects were completed, and the remaining were in various stages of development at the end of the project period. Sub-contracted research projects were funded with appropriations under Purpose VI of the Vocational Education Act of 1963, and from the Elementary and Secondary Education Act (89-10), available to the Commonwealth Department of Education.

Dissemination of information

All staff members have been involved in the preparation of publicity materials and in individual or group contacts to promote the Unit's operation. The dissemination of information has been undertaken through radio, television and newspaper releases; individual contacts, conferences and informal talks to professional groups and group conferences; annual and special reports; preparation of occupational guides; documentary films, besides presentations through television and news stories for publication in local papers. There has been a continous flow of information into the RCU and from other RCUs.

Agencies and Organizations Contacted

The following agencies have been contacted in the development of the work:

a. Puerto Rico Planning Board

b. Department of Labor

c. Department of Public Health

d. Department of Social Services

1. Vocational Rehabilitation Division
2. Public Welfare Division

e. University of Puerto Rico

1. Graduate School
2. Social Sciences Research Center
3. Educational Research Center

f. Economic Development Administration

g. Department of Education

1. Special Education Division
2. Research Division of the Planning and Development Area
3. Community Relations Area
4. Statistics Division
5. Evaluation Division
6. Area for Adult and Cultural Education

h. The Model City Program, San Juan Area

i. Puerto Rico Renewal and Housing Corporation

j. Puerto Rico Renewal and Housing Administration

Evaluation

No formal evaluation was performed during the project period, however, contribution was made to the Oregon national project dealing with the RCU's evaluation. Progress and annual reports have been submitted, covering outstanding accomplishments and projections of the research subsystem.

Evaluation has been a continuous process; reviews and suggestions have been regularly made by RCU staff members, the top level vocational education staff and the program directors. Most of the advisory assistance has been obtained from the Assistant Secretary for Vocational and Technical Education, the vocational staff at the central level, and from several outside sources.

Consultants

Several persons have provided a variety of consultative services, including recommendations for elaborating proposals and for the development of activities within the projects underway, and inspiration, motivation and guidance for the RCU operations. Outstanding specialists from the mainland and the Commonwealth have shared project accomplishments and have stimulated the RCU staff toward achievement of goals.

Continuation Under the Vocational Education Amendments of 1968

Research provisions in the Puerto Rico Plan for Vocational Education were designed by the RCU staff, and approved by the Commonwealth Board for Vocational and Technical Education and the Commonwealth Advisory Board for Vocational and Technical Education. Objectives defined for the establishment of the RCU shall continue to give direction to the research subsystem as part of the entire vocational education system. Professional staff shall continue to provide leadership to the research program, with supportive staff as needed for project development and monitoring.

Established regulations and procedures for the application for funds for research and research related activities, as spelled out in the Commonwealth Plan, shall be disseminated among interested persons.

SIGNIFICANT FINDING AND EVENTS

Perhaps the most significant finding and event during the project period has been the process gone through in developing an organizational structure and in providing facilities for the research subsystem, likewise, the development of a research oriented atmosphere upon which to base future work.

The principal task has been establishing the needed relationships, and initiating a series of activities aiming at the development of procedures and more efficient and practical methods which will make the results of the research subsystem more accessible and readily available not only to vocational educators, but also to government and private agencies, and to interested individuals.

The preceeding section described the methods used, and in a general manner, how the most important functions were undertaken. The following portion of this report is devoted to brief summaries of the major accomplishments related to each of the various categories of activities.

Research Development

As of August 31, 1969, and during the 17 month period of RCU operation under Section 4 (c) of the Vocational Education Act of 1963, the RCU dealt in some way or another with 19 projects, and a varied number of research related activities. Of these 19 projects three were not approved for funding and three were withdrawn because of lack of funds or other reasons.

An approximate amount of $65,000 was used for RCU activities, and project development during this period, including already committed funds upon inception of the RCU. Of this amount $58,060 corresponded to original Grant funds.

By the end of the period three projects had been completed, and ten were in various stages of completion.

RCU has made substantial progress towards achieving its research objectives. Activities completed in the various projects have been most encouraging, even though there has been a delay in project development because of financial limitations.

Specifically, major outcomes have been evidenced in the curriculum methodology project. The measure of impact has been the visible application of vocational and technical theory and methodology to actual program implementation, the production of actual curriculum materials, the planned effort of local staff to carry on the work initiated by the project team, and the

genuine interest in reviewing vocational education activities; planning, developing, implementing, and evaluating new programs in vocational education; staff training activities, and the utilization of current resources to produce maximum output in vocational education.

A. Projects Conducted

1. Study on Vocational Education Courses in Trade and Industry, Distribution and Marketing, and Office Occupations Programs in the San Juan Metropolitan Area

The purpose of this study was to determine how to enrich the humanistic aspects of the respective curriculum and improve the learning experiences to vocational training. This study was completed and its results will be introduced in 1969-70. A former superintendent of schools, serving in an advisory capacity was in charge of this project in cooperation with the RCU staff.

2. Feasibility and General Planning of an Area Vocational School to Serve the Yabucoa Area in Puerto Rico

This study, contracted with a private organization, aimed at determining the future manpower needs of the Yabucoa Area, based on the impact of the proposed establishment of the Sun Oil Petrochemical Complex in this Area, and preparing a plan of action to adequately supply the manpower needs projected.

This study was undertaken to comply with a request from the Commonwealth Legislature. Several of the specific recommendations have already been implemented specially those dealing with the establishment of several vocational training programs in provisional facilities until the new school is established.

3. Study on Enrollment and Dropouts in the Cooperative Industrial Education Program, Based on 1967-68 Enrollment Monthly Reports

Statistical data were gathered about enrollees, job placement and dropout rate of the Cooperative Industrial Education Program during 1967-68, for determining program's status and further implementation in various schools.

4. Study on Dropouts from Vocational Education Course, 1967-68

This study aimed at determining, among other things, the dropout rate from the various vocational and technical education courses and reasons for dropping courses, to take necessary steps for meeting the needs of enrollees in vocational and technical education courses to help them stay in school until completion of their preparation for entering the world of work. Report is almost completed.

5. Follow-up study of graduates from vocational and technical education courses, 1967-68

This study aimed at determining the present status of graduates from vocational program at the secondary and postsecondary levels, and served as a basis for program reports.

6. Inventory of Research Informal Studies, and Surveys Undertaken by the Vocational and Technical Education Programs in Puerto Rico during the years 1957-58 through 1967-68

This study was intended to determine, among other things, types of problems studied, findings and recommendations, and use made of such findings and recommendations, as a basis for future work. This project was initiated as an inhouse activity, and the compilation made is available for users of the RCU library.

Projects Approved Pending for Initiating

Survey on manpower occupational needs in the agricultural sector in Puerto Rico and on facilities and programs required to meet these needs. This project began in April 1968, in coordination with the Educational Research Division of the Department of Education. The preliminary draft of the proposals was reviewed and recommendations made before submittal for approval by the Commonwealth Board. This study was still pending for funding at the end of the project period.

Informal Studies

Informal study of current procedures for statistical data collection, processing, and disseminating as a basis for developing a pilot action plan better adapted to present needs

Several meetings were held with representatives of the vocational industrial training program and recommendations made on new forms. As a result, a one-day seminar was sponsored by the RCU with the whole staff during February 1969. Main purpose of this seminar was to analyze different aspects of the vocational industrial training program and the types of statistical data that need to be collected for reporting to such local government agencies as the Departments of Labor, Health; annual and quarterly reports, and for other purposes. The new forms for data collection were reviewed and recommendations made for improved effectiveness. These forms are being tried out before adoption for general use.

B. Ongoing Projects

1. Educational Implications of Present and Prospective Needs for Skilled and Non-Professional Technical Personnel in Puerto Rico

The purposes of this study are to assess on as broad as is feasible the essential nature of the present and prospective needs for skilled and non professional technical personnel, to identify areas of current prospective critical shortages, to survey in depth such areas as to uncover the fundamentals factors determining such shortages, and to develop indicators on probable training needs to face existing occupational shortages. Results will provide data on occupational needs essential to effective educational planning for the development of properly trained manpower resources.

Will be completed during 1969-70.

2. Study on The Development of a Flexible Curriculum Planning Methodology for Vocational Education Courses

This research covers four main aspects, as follows:

a. Development of a flexible methodology for the preparation of curriculum materials

b. Development of a resource allocation model

c. In-service training on vocational education curriculum

d. Development of a system approach to the evaluation of vocational education programs

This project is being developed under contract with the CONSAD Research Corporation, of Pittsburgh, Pennsylvania. A member of the vocational education staff was released from his position during part of the school year 1968-69 to serve as liaison with CONSAD and the RCU in the development of the project.

A teacher handbook entitled "A Methodology for Curriculum Development" was prepared for the Health Occupations and Electro-Electronics areas. Each handbook, which may be utilized by teachers, guidance counselors, supervisors, and students includes: an overview of the occupational area, job hierarchy charts, job requirements and condition forms, the tasks of the selected jobs, behavioral training objectives, and revised learning materials.

Occupational Area-Division-Job Hierarchy Charts were completed for all jobs in the economy. Forty occupational areas and 166 divisions were identified. Specific jobs within each division were arranged in a

hierarchical order ranging from the lowest level job in terms of skill, education and training requirements to the highest level job. The resulting Job Hierarchy Charts were discussed by the project team with the RCU director and the Assistant Secretary for Vocational and Technical Education, and members of the Planning Board, as tools in identifying priority needs in manpower needs and educational programs.

Data gathering activities for the development of a resource allocation model in Health Occupations were undertaken and a demostration of an operational model made. The concepts of planning and resource allocation were covered during a three day conference and a staff training institute.

Relationship with the Job Corps curriculum needs, also part of the project, was initiated. Preliminary plans were completed for utilizing the results on this research effort in implementing selected training materials at the Job Corps Centers.

Discussion with the Planning Board focused on the new schools currently under design, and the application of PPBS and vocational education curriculum development methodology to the planning of new school facilities.

By August 1969, Phase I had been completed, and work on Phases II and III started. In-service training activities as part of this research project were developed, as follows:

a. A three-day conference on Vocational Technical Education, conducted at the Dorado Hilton Hotel on May 14-16, to analyze the increasing role of curriculum in the development of vocational and technical education programs in Puerto Rico. Representatives from the Department of Education, the Puerto Rico Planning Board, industry and other public agencies in Puerto Rico and the Virgin Islands participated.

   Purposes of the conference were to: (1) identify basic principles in vocational and technical education with implications for improved planning and curriculum development, (2) identify curriculum needs in vocational and technical education for improved programs and services, (3) explain and discuss new techniques in curriculum planning and development, (4) analyze techniques of effective coordination with state, regional, and local personnel in the development of vocational and technical education curriculum, and (5) develop increased capabilities for curriculum development and planning. A comprehensive report of the conference was prepared.

b. A Staff Training Institute was conducted from June 16-29, 1969 as part of this research project. Vocational education supervisors and teachers and directors of vocational industrial training, agriculture, home economics, industrial arts, marketing and distribution, and health occupations defined the concept of vocational education, the relationship between vocational education and the economy, industry,

the Planning Board, other governmental agencies, and academic education at all levels. Products of the institute included: (1) production of one curriculum module by each member of the training institute, applying the concepts of curriculum development methodology, (2) development of a list of recommendations for curriculum development for vocational technical educational development in general, and for specific vocational and technical education areas, (3) development of proposed plans to continue the work of the institute in each vocational area, and field test the materials prepared.

Both activities were co-sponsored by the CONSAD Research Corporation, of Pittsburgh, Pennsylvania, and the RCU. Several one day special training programs related to this project were also developed for special groups.

Participants of the Staff Training Institute and the RCU director attended a PPBS Seminar at the School of Public Administration, University of Puerto Rico. They learned about the PPBS system and served as vocational subject matter experts in applying PPBS to vocational education and problems of unemployment. The director of the RCU delivered a speech on "Impact of Vocational and Technical Education to the Economic and Social Development of Commonwealth of Puerto Rico". Attending this seminar were representatives from the Department of Labor, Economic Development, Planning Board, Department of Education, Right to Work Administration, all of whom joined in applying PPBS to problems of unemployment and underemployment. The Area for Vocational and Technical Education was represented by an Assistant Director of the Vocational Industrial Training Program during the entire seminar.

This curricular project, of great scope for the curriculum aspect of vocational and technical education programs in the Commonwealth, will provide the basis for revising and carrying out the Curriculum Development Plan of vocational and technical programs in the future.

3. Follow-up of Graduates and Evaluation of Home Economics Occupational Education Programs, 1964-1968

This study was initiated in June 1968 as an inhouse project, in cooperation with the Home Economics Education Program at the state level.

The purpose is to find out how effective the Home Economics Occupational Education Program has been in achieving its major purpose - that of preparation of youth and adults for gainful employment. It covers five phases: (a) follow-up of graduates, using the interview method, to determine among other things, present occupational status of trainees, type of employment hold and job satisfaction, salaries obtained, usefulness of training, and future occupational plans, (b) interviews with employers to determine employers satisfaction with employees

behavior at work, usefulness of the training in terms of graduate's work performance, and aspects of training program needing reorientation, (c) interviews with school administrators and with home economics supervisory staff members, to determine educational and administrative problems, as well as situations that need further analysis for program implementation and development, (d) analysis of administrative procedures presently used, and (e) study of available curriculum guides, teaching aids, and other reference materials for program development.

Outcomes of this study are expected to point out the extent to which the Home Economics Occupational Education Program needs revision or expansion, the occupational areas which should be emphasized, and recommendations for curriculum contents and for the preparation of related teaching aids. As part of this project five regional meetings were conducted in five of six educational regions late May and early June 1969. The main purpose of these meetings was to offer orientation to some 150 participating teachers in Phase I of the project. Meetings included, among other things, a general overview of the project, analysis of the interview questionnaire, and interview procedures.

Data collection on Phase I which includes the follow-up of about 2,500 persons was completed and analysis started. The project will continue during 1969-70.

d. Study on the Organization and Functioning of the Guidance Services in the Public Schools in Puerto Rico

The purposes of this four-phase study are to determine the guidance counselor's image in the school and in the community, and projecting an adequate image of these services.

Phase one is a time study to determine how the guidance counselor use his time during the regular schedule in developing his program of work; opinion of the teaching and supervising personnel at the local schools about the counselor's work; counselor's perception of the work he does; and opinion of a representative group of parents and students about the guidance services offered. This study began in November 1967 and was started by an educational researcher on a contract basis, with funds available from Title VA of the National Defense Education Act.

Phase I was completed. Work on other phases was delayed because of lack of funds and unavailability to obtain the services of other trained personnel to continue the project. Work on Phases II through III shall continue as soon as resource personnel is available to complete the project.

e. Programs for the Disadvantaged

A proposal aiming at providing supervisory and technical personnel to promote the development of vocational and technical education programs

for disadvantaged and handicapped persons in depressed areas was approved for funding under Title I of the Elementary and Secondary Education Act. This project was approved in the amount of $125,000 and initially funded in the amount of $50,000.00

The research aims at providing seven supervisors, seven subject matter specialists, and audiovisual aids and teaching materials, as well as in-service teacher training programs during 1969-70. The plans for project implementation were developed early July 1969, jointly with program directors, and its implementation was expected to begin during October 1969.

Thirty five school districts in the Island, considered as the most socio-economically deprived areas, and other deprived areas in large municipalities not connected within these areas with high unemployment and dropout school rates, shall be included in the project.

Vocational educational services include, in addition to an overall improvement of instruction and of in-service teacher training, greater attention to counseling services, development and or adaptation of curriculum materials for disadvantaged students, more effective and more extensive use of audiovisual aids and intensified supervision in the schools within the depressed areas.

6. <u>Study of present administrative forms being used by the various vocational and technical education programs to evaluate these in terms of usefulness and purposes, to decide on elimination or revision indicated for improved effectiveness</u>

Forms were gathered and organized according to use and reviewed. Revision of part of this material has been performed.

C. Other Research Related Activities

1. Data Gathering Activities

Assembled materials and developed survey forms for collecting data about graduates from vocational and technical education courses, 1967-68 and 1968-69, as basis for a follow-up studies.

2. Informal Studies

Using available information at the Central Office, statistical data about numbers of graduates from practical nursing courses, 1952-1967, and job placement were gathered as a contribution to the Health Occupations Education Advisory Committee.

3. Consultative Assistance to Graduate Students

a. Provided consultative assistance to graduate students from the Graduate School of the College of Education, University of Puerto Rico and provided background information for planning their thesis projects. These projects were related to follow-up of graduates from vocational and technical education programs, study of occupational needs in various communities, vocational education offerings and vocational education program outputs.

b. Consultative services were also provided to a group of home economics teachers doing graduate work at the New York University, for the preparation of term papers and for planning research projects as part of the requirements for the master's degree.

4. Evaluation of RCU

a. An evaluation of the RCU activities was prepared for the Oregon Evaluation of Research Coordinating Unit's project. This evaluation involved consulting with the RCU staff, the Assistant Secretary for Vocational and Technical Education, and with other vocational and technical staff members at the Central level.

b. Continuous evaluation was done from the Office of the Assistant Secretary of Vocational and Technical Education.

5. Commonwealth Plan for Vocational and Technical Education

The preparation of the new Commonwealth Plan for Vocational and Technical Education was a cooperative effort, including voca-

tional personnel and representatives of agencies in the Commonwealth, with which coordination of services is maintained. Among these were: the Puerto Rico Planning Board, Departments of Labor, Health, Social Services, Agriculture; Extension Services; Administration of Consumer Education Services; Right to Work Administration; Model City Program; institutions of higher learning and junior colleges, besides lay people and representatives of all the vocational and technical education programs, and of other programs and services within the Department of Education.

The RCU director, assisted by the technical advisor, reviewed the law and interpretations of the Vocational Education Amendments of 1968 (P.L. 90-576), and the tentative draft copy of Rules and Regulations to Implement the State Plan Provision of the Vocational Education Amendments of 1968.

Attention was given to developing the revised Commonwealth Plan for Vocational Education, under Vocational Education Amendments of 1968. The RCU staff participated in the development of the various sections of the Plan and offered assistance to special committees in charge of developing various sections.

The RCU director, assisted by a special Vocational Research Committee designated for this purpose developed research policies to implement the research program envisioned under the Vocational Education Amendments of 1968. The RCU personnel was engaged in similar work related to curriculum, innovative, cooperative education, and exemplary programs and projects policies, contributed most of their time to data collection in manpower needs, analysis and tabulation, and served as members of outstanding committees to prepare the Administrative, Annual and Long-Range Program Plan Provisions.

A Summary was made to assist users of the legislation in program planning under this new legislation.

6. Proposals prepared in for which consultation services were offered

   a. Prospectus for a study on evaluation of the vocational industrial training program were received and recommendations made to the Assistant Secretary for Vocational and Technical Education. Prospectus were submitted by OISA Research Corporation and Caribe Consulting Services of local private research firms.

   b. Assistance was offered for, and effort and time given to the development of various project proposals. However, these were not approved. These include the following:

(1) Proposal for Research or Development of Bilingual Instructional Materials (Spanish and English) for a Total Training and Employment Program in Home Management with Related Basic Education Materials.

(2) Proposal aiming at requesting a planning grant for the preparation of a project proposal for a three and a half-year in-service teacher training program for vocational and technical education personnel in the Commonwealth of Puerto Rico, under the Education Professions Development Act.

(3) Proposal requesting an operating grant to develop a three and a half-year in-service teacher training program for vocational and technical education personnel in the Commonwealth of Puerto Rico, under the Education Professions Development Act.

(4) A proposal aiming at requesting funds under the Education Professions Development Act for the development of an in-service teacher training program in curriculum development for 50 provisional industrial arts teachers at the University of Puerto Rico, to complete certification requirements.

(5) Seven proposals presented by the Industrial Arts Program, as follows: six aiming at requesting funds for the professional advancement of industrial arts teachers in each of the six educational regions in the Commonwealth, and one requesting funds for the establishment of pilot industrial arts centers where equipment was to be improved and new curricula to be developed. These seven proposals were presented for funding under Title I of the Elementary and Secondary Education Act available to the Commonwealth Department of Education.

In-service Teacher Training Activities

The RCU had major responsibility in planning the in-service training program of vocational educators at the Commonwealth level.

A. Implementation of 1968 and 1969 Summer Session In-service Teacher Training Program at the Central Level

The summer in-service program provided the participation of over 1,500 teachers and supervisors in graduate courses at the Graduate School of the University of Puerto Rico, at several universities and in the Mainland, in seminars, technical institutes, and workshops be sponsored by the various vocational and technical programs.

A proposal was submitted and approved under Title I of the Elementary and Secondary Education Act aiming at providing 100 scholarship for vocational and technical education personnel working under provisional contracts, to pursue undergraduate work.

B. Leadership Development Activities

Several meetings were planned and developed at the Commonwealth level for leadership personnel. These meetings dealt with the Vocational Education Amendments of 1968 and its interpretation as a basis for implementing the Commonwealth Plan, the preparation of annual reports, data collection for various purposes, in-service training activities of the vocational personnel, and plans for implementing the development of new curriculum materials for vocational programs utilizing the new methodology developed as part of the curriculum research project.

A one-day seminar for directors of vocational programs, the director, subject matter technicians, intern teachers, and the vocational supervisors of the Arecibo Curriculum Center of the Arecibo Educational Region was conducted. Emphasis was on curriculum projections, and 1967-68 activities were evaluated as basis for the 1968-69 annual program plan on curriculum development and use.

Three special seminars on accident prevention were attended by RCU personnel and vocational staff members. The RCU had responsibility for selecting participants from vocational and technical education programs and obtaining funds for the payment of matriculation fees. These seminars were as follows:

February 25, 1969 : One-day seminar on the Role of Management and Motivation for the Prevention of Accidents, sponsored by the Puerto Rico Accident Prevention Council.

February 26-27, 1969: Two-day seminar on Psychology in Accident Prevention, Human Relation and Work Motivation, with four representatives, one from each of the business education, vocational agriculture and Youth Corps, and the administration services in the Area for Vocational and Technical Education.

February 28, 1969 : One-day seminar on Human Side of Security, with four participants, one from each of the vocational guidance, industrial arts, home economics, and vocational industrial training programs.

C. Attendance of RCU Personnel to In-service Programs

Six members of the vocational and technical education programs and the RCU personnel participated in a 30-hour seminar on Designing and Planning Educational Research, at the University of Puerto Rico. One of these is a member of the RCU, two will be engaged in research to be developed under the auspices of the Unit, and the rest will serve as liaison officers of their programs with the Unit.

July 22-August 2, 1968: The RCU assistant director attended a seminar on occupational analysis and its application to curriculum development in vocational and technical education in different levels of teaching. This seminar was held at Colorado State University, Fort Collins, Colorado, from July 22, 1968, through August 2, 1968. Emphasis was given to key elements in the development of occupational competencies and the components of vocational education and training based on occupational analysis, preparing content analysis charts, use of the Dictionary of Occupational Titles, and PERT Process. The experiences had in this seminar were shared with vocational and technical educators during in-service teacher training programs. Was helpful also in building up or revision of curriculum for the various courses.

December 9-12, 1968	:	The RCU director attended the following activities: American Vocational Association National meeting held in Dallas, Texas, as President of the Puerto Rico Chapter of AVA and as head of the eight-member delegation from Puerto Rico. Also representing the Secretary of Education and Executive Officer of the Commonwealth Board for Vocational Education attended the meetings held during AVA convention for State Board members.
April 7-11, 1969	:	Regional Conference in Vocational Education held in Richmond, Virginia, as a member of a nine-member delegation from the Commonwealth. After this meeting considerable time and effort were given to develop priorities for the implementation of the Vocational Education Amendments of 1968.

Dissemination Activities

The dissemination of information about vocational education programs, research, and research related activities, continued to be one of the major responsibilities entrusted the RCU.

Even though a research dissemination specialist was not made available during the project period, the RCU staff joined efforts with other vocational and technical education personnel at the Central Office, and with some temporary resources, to provide vocational education educators and cooperating agencies with the requested information about vocational and technical education programs, and to develop some materials for dissemination purposes.

Conferences, informal meetings, personal talks, were given to different groups; written materials were distributed and publications made.

A continuous flow of information took place between the RCU and the various vocational and technical education programs at all levels, other private and government agencies and interested groups, about vocational and technical education program offerings, outcomes and projections.

A Reader Printer 3M-400B and duplicating machines were purchased. Plans for the ensuing year includes a subscription to ERIC microfiches for dissemination activities.

The following major activities were undertaken during the project period.

1. Development of a Research Library

   There is an RCU library, which includes more than 2,000 titles of shelved materials. The RCU has obtained, filed and has available printed copies of research reports, curriculum materials; RIE, ARM, AIM, publications; ERIC publications; bibliographical references to materials available from other RCU's; periodicals, brochures, bulletins, news-letters, professional books, reference materials on employment, unemployment, manpower, and other vocational library collections. All titles are coded according to their specific contents, and cross-indexed of most of them has been done. The preparation of a bibliography was started.

2. Statistical reports

   Data on vocational education outputs were readily available for reporting purposes and for program planning. These petitions constituted a very valuable source for designing a system for data collection, storage and dissemination, which was initiated. By the

end of the project period the preparation of a publication on the most outstanding statistical data in vocational programs had been started.

Statistical reports were constantly provided, among others:

Report on statistical data on vocational and technical education programs in Puerto Rico, by programs, type of courses, schools and training centers, and individuals served, prepared upon request of the Secretary of Education for a special report to be presented to the Commonwealth Legislature.

Statistical data on vocational and technical education programs in fiscal years 1959 and 1969, prepared upon the request of the Planning and Development Office of the University of Puerto Rico.

Report prepared upon the request of the Secretary of Education for the Governor's Advisory Council, dealing with educational services available through the various vocational and technical education programs and work accomplished during the last five fiscal years, available budget, problems encountered, and recommendations for improved services.

Information and statistical data on outstanding accomplishments of vocational and technical education programs in 1967-68, for a press conference sponsored by the Commonwealth's Secretary of Education. As a result of this press conference various articles appeared in main Commonwealth papers and news were released for radio and television programs.

3. Liaison with vocational programs

The RCU maintained liaison with the directive personnel of all vocational and technical education programs at the Commonwealth level and with members of the regional personnel, aiming at collecting the needed information for the preparation of the 1967-68 and 1968-69 annual reports of the Area for Vocational and Technical Education to be submitted to the Commonwealth Department of Education and to the USOE. To this effect descriptive and statistical data were collected from the various programs and organized for proper reporting.

4. Films

a. The production of La Decisión, (The Decision) a fifteen-minute documentary film on vocational and technical education in Puerto Rico was subcontracted with a private film production company. This project was directed by the public relations

officer of the Area. Preview of the film was held for 200 vocational and technical education higher level professional personnel, representatives from the Labor, Health, Social Sciences, Agriculture and Commerce Departments, and the public interest. The film has been presented to the Commonwealth Board for Vocational and Technical Education, Puerto Rico Advisory Council for Vocational and Technical Education, members of vocational education advisory committees, and the various vocational education program staffs. Well over 1,500 individuals have previewed the film in more than 30 meetings; among them, public and private school teachers, guidance counselors, and students. It was, likewise, shown at a national meeting of State Director's for Vocational and Technical Education. This film has already proved to be very effective in attracting students, especially unemployed and out-of-school youth, to vocational and technical education programs.

b. A documentary film about program offerings at the San Juan Technological Institute, in Hato Rey, was prepared for showing in local and in major community theaters. This film was developed under contract with a private film production company. It was doubled in video tape for multimedia use by WIPR-TV, the Government television station. This activity was undertaken jointly with the public relations officer for the Area and the director of the Technical Education Program.

5. Newsreleases

Over 50 newsreleases covering program activities and projects, outstanding accomplishments of the vocational and technical education programs, activities of youth organizations sponsored by vocational education programs, and of professional organization related to vocational education were prepared and submitted to local papers, television, and radio.

6. Occupational guides

Five occupational guides were completed in rough form for the Guidance Program, as follows: (1) The Social Worker, (2) The Civil Engineer, (3) Hotel Services Training, (4) Health Occupations, (5) Vocational Education in Puerto Rico.

7. One copy of the Flier Ed-Voc-Tech., was published and disseminated at the central and regional levels. This publication presented information on different aspects covered by the RCU in 1967-68.

8. Talks and conferences

   a. Talks about the RCU's purposes, scope of activities, and available services were delivered to members of the Advisory Councils of the vocational programs, to various organized groups, and to participants in a Commonwealth Meeting for Vocational and Technical Education Staff, in the Second Islandwide Institute on Home Economics Occupational Education Programs and in the First Islandwide Institute in Home Economics Education Programs for Needy Persons.

   b. The RCU staff members joined the Commonwealth Vocational Education staff in conferences and meetings aiming at making interpretations of the new federal legislation, Vocational Education Amendments of 1968.

   c. Some 1,000 copies of a summary of the Vocational Education Amendments of 1968, was prepared and distributed among vocational educators, government officials, and interested people.

   d. A rough copy of an RCU brochure was developed for distribution. Its purpose is to assist the RCU staff and vocational educators in leadership positions in explaining the RCU functions and the research subsystem to vocational educators at all levels as well as to interested persons.

9. Other dissemination activities

   a. Guidelines for the submission of prospectus and proposals were shared with interested people, following same procedures as established by the U. S. Office of Education.

   b. Information was circulated among vocational and technical education personnel about summer training programs approved for 1968-69 sponsored by the USO under Section 4(c) of the Vocational Education Act of 1963.

Other Activities

The RCU personnel was actively involved in counseling with persons, offering consultation services, serving as resource persons in educational activities and in the development of instructional materials by vocational programs, reviewing occupational education information, and studying and recommending the purchase of instructional materials. As a member of the central office staff, the director served on a varied number of educational committees, attended numerous meetings, and served the office of the Assistant Secretary for Vocational and Technical Education in various capacities.

1. Coordination of Efforts

One of the major accomplishments has been the coordination of efforts, broad participation, and use of all available resources through individuals, vocational educators, and agencies and units of the Commonwealth having varying degrees of obligation concerning education, manpower needs, and social and economic planning development. Agencies and Units in the Commonwealth having direct or indirect concern with the coordination of occupational and research activities with which this close coordination has been established include the Puerto Rico Planning Board; Departments of Labor, Health, and Social Services; Economic Development Administration; Social Science Research Center, University of Puerto Rico; Adult and Cultural Extension, Community Relations, and Planning and Development Areas of the Commonwealth Department of Education; the Puerto Rico Urban Renewal and Housing Corporation; and the Urban Renewal and Housing Administration; among others.

The RCU personnel has contributed in establishing a two way communication with these agencies, the vocational and technical education personnel, teacher training institutions, and with many other individuals interested in the development of vocational and technical education programs.

2. Collection and Storage of Statistical Data

Data collection available at the RCU include enrollments in all vocational programs, by educational level, grade, and types of individuals served during 1963-64 through 1968-69; numbers of programs by services; numbers of vocational and technical education personnel at all levels by vocational program, schools, and school district; results of 1966-67 and 1967-68 follow-up studies of graduates from vocational education programs at the secondary and post-secondary levels; manpower needs; numbers of public schools by school districts offering vocational education by programs; Commonwealth statistical

data projections for vocational and technical education, for use by the Area for Vocational and Technical Education which was a basis for the Annual Program Plan and Long Range Program Plan.

3. American Vocational Association, Puerto Rico Chapter, Annual Meeting

As president of the Puerto Rico Chapter of AVA the RCU Director had major responsibility for planning and developing the AVA program for 1968-69. Directed a variety of activities aimed at strenghtening the vocational and technical education programs in Puerto Rico. These activities culminated in April with the annual convention, around the year's theme -Vocational Education in Action.

This annual meeting was attended by vocational and technical educators; representatives of the Puerto Rico Vocational and Technical Advisory Council; members of the Commonwealth Board for Vocational Education; government officials; representatives of the industrial, commercial, and private sectors; and representatives of youth organizations sponsored by the vocational programs. Some 18 speeches were delivered in general and group sessions, most of which dealt with implementation of the new legislation Vocational Education Amendments of 1968. Main speakers at the opening meeting were Dr. Ramón Mellado, Secretary of Education; Dr. María Socorro Lacot, Assistant Secretary for Vocational and Technical Education; and Mr. Amadeo Francis, Executive Secretary for Industrial Association of Puerto Rico. Honored guest and main speaker at the AVA annual banquet was Hon. Luis A. Ferré, Governor of the Commonwealth, whose speech on "Importance of Vocational and Technical Education Now and in the Forseable Future", brought new insights into future expansions of the vocational and technical education programs in the Commonwealth to meet emerging and anticipated manpower needs.

4. Development of Research Leadership

In an attempt to help develop research leadership and capabilities a petition was made to the University of Puerto Rico, through the Commonwealth Secretary of Education, who is the Executive Officer of the Commonwealth Board and a member of the Council for Higher Education, for the inclusion of college courses at the undergraduate level dealing with educational research, curriculum development, and public information for vocational programs; likewise, for the addition of courses, at the graduate school on vocational education research, educational data processing, supervision and administration of vocational courses, evaluation, systems approach, and curriculum development for vocational courses. Our petition constituted part of a general plan submitted by the Secretary of Education to the University of Puerto Rico for the improvement of pre-service education program in general.

5. Proposals for amending various Commonwealth legislation affecting vocational education programs

a. Amendments were submitted to the Commonwealth legislation creating the Commonwealth Board for Vocational Education, to bring it up to date by adding a provision for the designation, by the Governor of Puerto Rico, of the Commonwealth Advisory Council for Vocational Education.

b. Amendments to legislation about accreditation of private schools, to include accreditation of vocational and technical private schools.

c. Amendments to legislation on the accreditation of practical nursing schools.

6. Other related activities

Numerous articles were edited, on translated into Spanish, upon the request of vocational program directors.

A questionnaire was prepared for use with individuals who have not completed certification requirements and are interested in requesting licences as practical nurses.

A proposed RCU budget plan for 1969-70 and 1970-71 was prepared for submittal to the Bureau of the Budget.

Curriculum Development

A. Home Economics Occupational Education

A curriculum project dealing with the preparation of a series of curriculum guides for home economics occupational education courses, at the first stage of completion upon RCU inception, was continued. Through the efforts of the RCU, six curriculum guides were tried out revised, edited and completed for publication and dissemination on 1969-70. The guides are related to courses on: Assistant Seamstress and Workers in Clothing Services, Short Order Cook, Specialist in Home Bakery, Special Catering Service, Assistant to Interior Decorator, and Companion to an Elderly Person or Convalescent. Several meetings were held with cooperating teachers and supervisors to exchange ideas about content of the various courses for evaluation purposes.

Outlines for final approval of five curriculum guides on Daily Food Preparation and Services, Bakery Specialist, Assistant to Homemaker, Assistant to Interior Decorator (advanced course), and Public Housing Aide.

The development of two curriculum guides on Baby Sitter and Nursery Aide and Florist was initiated.

Other projects included the development of a bibliography and a guide on the organization of home economics occupational education courses.

B. Distribution and Marketing Education

A draft of the manual, How Do You Start a Business? for teachers in Distribution and Marketing Education, was completed. This manual comprises four teaching units: What Kind of a Business? The Personality of a Store, Modern Aspects of a Business, and Appropriate Arrangement of Space and Equipment.

A manual in Color Applied to Everyday Living (La Era del Color), for use of Distribution and Marketing, Home Economics and Clothing teaching personnel was produced and was being edited by the end of the project period.

C. Other Curriculum Related Activities

The RCU collaborated with the J. C. Penneys firm in the study and recommendations for translating into Spanish of some 18 booklets on

different types of merchandise to be used as supplementary material in Home Economics and Distribution and Marketing Education classes. Recommendations were submitted for use in Puerto Rico of informative material related to a project called Financing A New Society, sponsored by Penneys to be used as a supplement to the How To Start a Business? manual. These curriculum materials were made available for publication by the Distribution and Marketing Program.

Upon request of the Household Finance Corporation, Chicago, Illinois, the Spanish version of three leaflets under the title of Mind Your Money were edited and recommendations made for their dissemination among Spanish speaking people.

Meetings and Special Designations

The RCU director attended regular meetings of the vocational and technical staff at the central level, and various meetings with other groups within the Commonwealth Department of Education, aiming at discussing different aspects of the vocational education programs. Among the most important are the following:

1. Meeting with the Director of the Data Processing Center of the Department of Education of the Commonwealth and its consultant, held with the RCU professional staff, to determine ways in which services and resources available at the Center may be utilized in RCU projects and activities.

2. Meeting held by the Secretary of Education and his State Staff with directive personnel of the San Juan Educational Region and researchers from Inter American Services and Counseling Organization to discuss a research report dealing with the regionalization of educational services. Recommendations emerging from this report will be used as a basis for further reorientation of work at the San Juan Educational Region.

The director served in various capacities in organized groups as follows:

- Member of The Advisory Councils of Home Economics Education Vocational Guidance Programs and Distributing and Marketing Education Programs, and attended several meetings of these groups.

- President, in 1968-69 of the Puerto Rico Chapter of the American Vocational Association.

- Member of the Board of Directors of the Puerto Rico Accident Prevention Council, and the Puerto Rico Family Life Institute.

- Member of the Planning and Steering Committees for the Puerto Rico Education Conference held in late April 1968, under the auspices of the Commonwealth Department of Education. Also served as chairman of the committee in charge of preparing a paper on Vocational and Technical Program Offerings for Youth 13 to 18 Years of Age to be presented at this conference.

- Member of the Commonwealth Department of Education Scholarship Committee, and as such, attended several meetings during which rules and regulations were revised to incorporate provisions for including vocational programs and application forms revised. Scholarships were granted to more than 400 individuals to pursue studies at the undergraduate level in the various professional fields, including vocational education.

PROBLEMS

Purposes and objectives of the RCU were achieved satisfactorily during the reporting period. The scope of activity was somewhat limited because of the following reasons:

1. Lack of vocationally oriented research personnel
2. Unavailability to obtain the services of regular staff, due mainly to limited numbers of researchers available
3. Failure to generate other funds for research
4. Failure to obtain approval of several of the submitted proposal

To cope with the above problems steps have been taken, and specific activities projected for 1969-70, as follows: a petition was made to the University of Puerto Rico, upon request of the Commonwealth Secretary of Education, soliciting the addition of courses on vocational education research in the graduate school curriculum; and seminars on research methods and techniques, data processing and Federal Grantmanship and proposal writing have been planned for vocational education personnel. These inservice training activities are expected to be developed during the 1970 summer months.

CAPITAL EQUIPMENT ACQUISITIONS

No equipment was purchased with Grant funds. Equipment purchased with Commonwealth funds and funds from other sources was served. Among others, general office equipment, Reader Printer 3M 400B, and duplicating machines.

FORMS

Several forms have been used by the RCU, most of which were designed to collect data for the various projects, and others to obtain specific statistical data about occupational education programs. No forms recquiring clearance by the Bureau of Research were used.

CONCLUSIONS AND RECOMMENDATIONS

Activities and accomplishments of the Puerto Rico Vocational and Technical Research and Development Coordinating Unit during its first 17 months since established, have contributed to set a basis for the research subsystem, for data collection, analysis and interpretation; and dissemination of information on vocational programs in the Commonwealth.

The Unit has achieved recognition as a group to be involved in research and research-related activities directed toward stimulating, promoting and coordinating programs and projects with studies on adaptation of occupational needs for skilled and non-professional workers to the present and projected needs of the different economic sectors, and toward improvement of the Vocational and Technical Education programs in the Commonwealth of Puerto Rico.

There is a definite need in Puerto Rico to establish Islandwide research subsystem through contacts with all technical and vocational education programs at the local levels, for coordinating currently needed research within and between business and industry with communities, all the educational institutions, associations and public agencies, and to disseminate and share information to a greater extent with these groups.

FUTURE ACTIVITIES

Future activities include the development of research plans as provided for in the Commonwealth Plan.

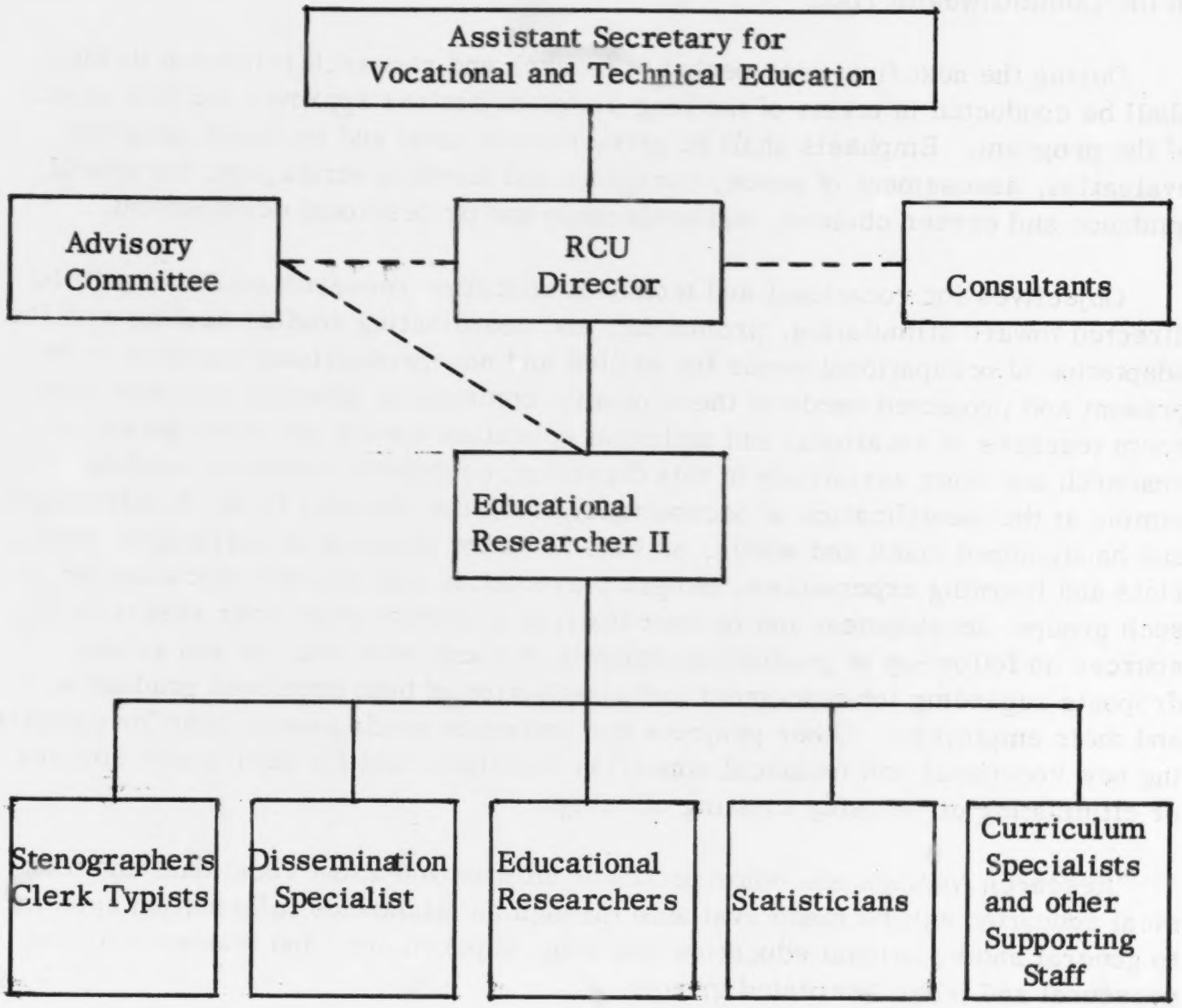
During the next five-year period, research and research related activities shall be conducted in terms of the long-range objectives approved for this aspect of the program. Emphasis shall be given to vocational and technical program evaluation, assessment of needs, curricula and teaching strategies, vocational guidance and career choices, and leadership and professional development.

Objectives for vocational and technical education research activities will be directed toward stimulating, promoting, and coordinating studies dealing with the adaptation of occupational needs for skilled and non-professional workers to the present and projected needs of the economic community; promote and lead classroom teachers in vocational and technical education toward the development of research and offer assistance in this direction; coordinate research studies aiming at the identification of occupational problems inherent to the disadvantaged and handicapped youth and adults, as well as to the planning of curriculum materials and learning experiences, program evaluation and teacher education for such groups; development and or coordination of studies with other research resources on follow-up of graduating students in vocational courses and school dropouts regarding job placement and satisfaction of both employed graduates and their employers. Other projects may relate to needs assessment for establishing new vocational and technical education facilities, and for adding new courses or eliminating or revising existing offerings.

Research findings and other pertinent information about vocational and technical education will be made available through an islandwide information system to general and vocational education teaching, supervisory, and teacher training personnel and other interested groups.

Teaching personnel in vocational and technical education shall participate in various in-service training programs on educational research methods and techniques, curriculum development and use, public information, career choices, evaluation, and other staff training activities.

ORGANIZATION OF THE VOCATIONAL AND TECHNICAL EDUCATION RESEARCH AND DEVELOPMENT COORDINATING UNIT



The RCU serves as a research arm of the Commonwealth Board for Vocational Education. It derives its leadership from the Commonwealth Area for Vocational and Technical Education in coordination with the Research Division of the Commonwealth Department of Education.

The operation of the RCU is derived from definitions of advisory and administrative functions.

Consultation and advisory functions are implemented through advisory committees made up of representatives of members of vocational education, industry, community and government.

Appendix 2

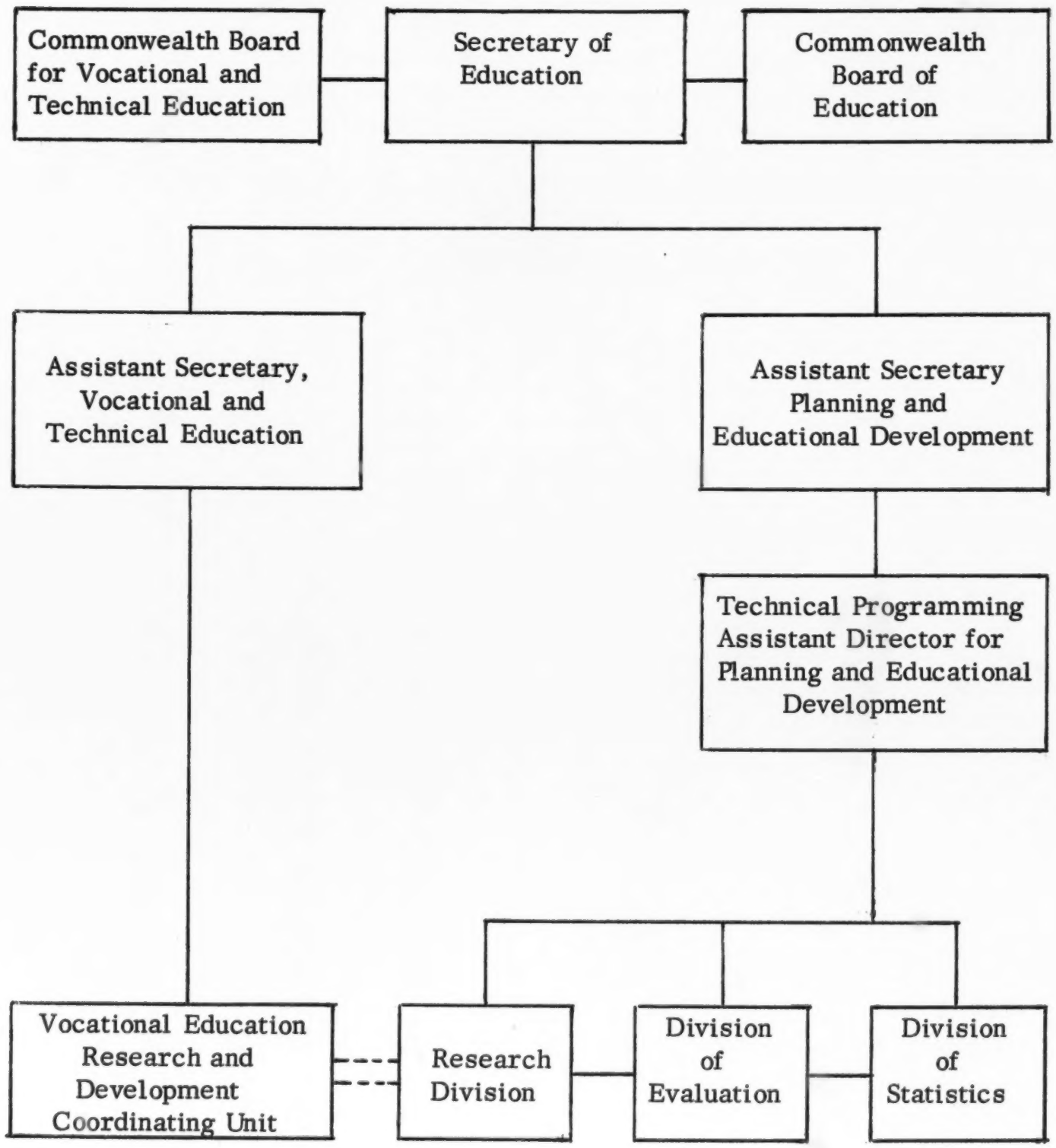
STAFF SUMMARY

Name	Title or Function	Period Employed	Percent of Time (or Consultant Days)
Mrs. Ana L. Reyes de Martínez	Project Director	April 1, 1968 August 31, 1969	100%
Mr. Ramón Iglesias Borges	Assistant Director	April 1, 1968 August 31, 1969	100%
Mrs. Carmen C. Arroyo	Researcher	April 1, 1968 December 30, 1968	100%
Mrs. Phyllis Hole	Researcher	May 1, 1968 November 15, 1968	85%
Miss María L. Martínez	Assistant Researcher	June 1, 1968	100%
Mr. Eduardo López Cabezas	Assistant Researcher	January 1, 1969 August 31, 1969	66 2/3%
Miss Jenny E. García	Assistant Researcher	February 1, 1969 August 31, 1969	50%
Mrs. Reina C. Rodríguez	Assistant Researcher	April 1, 1969 August 31, 1969	50%
Mr. Salvador Baigés	Occupational Analyst	April 1, 1968 December 30, 1968	40%
Mrs. Antonia F. Barkell	Consultant (Distribution and Marketing)	April 1, 1968 June 30, 1969	28%
Mrs. Julia Martínez de Calderón	Home Economics Curriculum Specialist	April 1, 1968 June 30, 1969	100%

Name	Title or Function	Period Employed	Percent of Time (or Consultant Days)
Mr. Erasto Rivera Tosado	Consultant (Academic)	April 1, 1968 June 30, 1969	28%
Mr. Luis F. Vázquez	Technical Advisor	June 1, 1968 March 31, 1969	50%
Mr. José Carlos Gutiérrez Prats	Statistician	July 15, 1968 April 30, 1969	100%
Mr. Jaime López López	Statistician	July 1, 1968 April 30, 1969	100%
Miss Irma G. Rosa Batista	Statistician	May 15, 1969 August 31, 1969	85%
Mrs. Mirtho Arzola	Librarian	September 1, 1968 December 30, 1969	50%
Mrs. Luz María López	Librarian	June 30, 1969 August 31, 1969	80%
Miss Beatriz Lizardi	Stenographer	May 1, 1968 August 31, 1969	100%
Mrs. Carmen A. Nieves	Stenographer	June 1, 1968 August 31, 1969	66%
Miss María del Carmen Ruiz	Stenographer	June 1, 1968 August 31, 1969	85%
Mrs. Angélica Sánchez	Typist	October 1, 1968 December 30, 1968	60%

Name	Title or Function	Period Employed	Percent of Time (or Consultant Days)
Mrs. Angelina Dávila	Typist	October 1, 1968 December 30, 1968	60%
Mrs. María E. Falú	Stenographer	October 1, 1968 August 30, 1969	60%

RELATIONSHIP OF THE VOCATIONAL AND TECHNICAL, RESEARCH AND DEVELOPMENT COORDINATING UNIT TO THE COMMONWEALTH DEPARTMENT OF EDUCATION


Commonwealth Board for Vocational and Technical Education
Secretary of Education
Commonwealth Board of Education
Assistant Secretary, Vocational and Technical Education
Assistant Secretary Planning and Educational Development
Technical Programming Assistant Director for Planning and Educational Development
Vocational Education Research and Development Coordinating Unit
Research Division
Division of Evaluation
Division of Statistics

The functions of the Research Coordinating Unit were coordinated with those of the Research Division during its inception period. This Division was discontinued, however services were provided in coordination with the Division of Planning and Development of Operational Programs of the Department of Education, as part of the Area for Educational Planning.